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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,436	09/13/2001	Tatsumi Watanabe	50023-150	3632
20277	7590	04/21/2005	EXAMINER	
MCDERMOTT WILL & EMERY LLP			DANG, DUY M	
600 13TH STREET, N.W.			ART UNIT	
WASHINGTON, DC 20005-3096			PAPER NUMBER	
			2621	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,436

Applicant(s)

WATANABE ET AL.

Examiner

Duy M Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-22, 24-31, 33-39 and 41-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 23, 32 and 40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/13/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Applicant's election of Species 7 (claim 23, 32, and 40) filed on January 12, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-22, 24-31, 33-39, and 41-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

2. Applicant's amendment is advised in response to this office action to cancel all claims directed to non-elected species/inventions.

3. A copy of the initialized PTO-1449 filed on September 13, 2001 is accompanied herein.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 23, 32, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wober et al. [US Patent No. 5,740,284] in view of Takeuchi [US Patent No. 6,141,061].

Regarding claims 23 and 32, Wober teaches:

original image orthogonal transforming means for generating the frequency components of an original image by performing orthogonal transform on said specific image data [i.e., the

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“forward discrete cosine transform (DCT)” mentioned in col. 4 lines 25-27] corresponds to claimed transforming means];

enlarged frequency estimating means for estimating the frequency components of said enlarged image by performing nonlinear interpolation on said original image frequency components [see interpolation for enlarging image mentioned in col. 4 lines 21-22], and

inverse orthogonal transform means for acquiring an enlarged image data by performing inverse orthogonal transform corresponding to said enlargement size on said estimated frequency components of the enlarged image [i.e., the inverse discrete cosine transforms (DCT) mentioned in col. 4 lines 25-27].

While Wober teaches using interpolation to enlarge image, Wober does not explicitly teach nonlinear interpolation. However, using nonlinear interpolation is well known in the art as evidenced by Takeuchi who suggest to use such nonlinear interpolation according to column 19 lines 35-39.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the nonlinear interpolation as suggested by Takeuchi in combination with Wober as suggested by Takeuchi. Utilizing nonlinear interpolation would provide advantages such as more accurate estimation, more pixel information represented image, smoother image thereby improve interpolation results.

Regarding claim 40, it is noted this claim recites a recorded medium on which a program is recorded for carrying out the claimed features called for in claims 23 and 32. Thus, the advanced statements as applied to claims 32 and 32 above are incorporated herein. Wober

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further teaches the use of computer for image processing [see col. 1 lines 39-41 and col. 2 lines 35-38] and so does Takeuchi [see computer program mentioned in col. 19 lines 25-30].

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kojima [US Patent No. 5,454,052] and Kanno et al. [US Patent No. 4,903,147] are examples of image processing.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M Dang whose telephone number is 571-272-7389. The examiner can normally be reached on Monday to Friday from 6:30AM to 3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dmd
4/2005



Duy M. Dang
Patent Examiner